

=> d his

(FILE 'HOME' ENTERED AT 16:28:47 ON 11 FEB 2008)

FILE 'MEDLINE, SCISEARCH, CAPLUS, BIOSIS' ENTERED AT 16:29:00 ON 11 FEB 2008

L1 11800 S INSULIN? (L) AKT?  
L2 415 S L1 AND PY<=1997  
L3 336 DUP REM L2 (79 DUPLICATES REMOVED)  
L4 336 FOCUS L3 1-  
L5 0 S L4 AND ELEGANS  
L6 199 S L1 AND ELEGANS  
L7 0 S L6 AND PY<=1997  
L8 105 DUP REM L6 (94 DUPLICATES REMOVED)  
L9 105 FOCUS L8 1-  
E RUVKUN GARY?/AU  
L10 16 S E1  
E RUVKUN G/AU  
L11 194 S E3  
L12 29 S E4  
L13 247 S E5  
L14 486 S L10 OR L11 OR L12 OR L13  
L15 188 DUP REM L14 (298 DUPLICATES REMOVED)  
L16 9 S L15 AND L1  
L17 9 SORT L16 PY

=> d ti so au ab l17 2

L17 ANSWER 2 OF 9 MEDLINE on STN  
TI Caenorhabditis elegans Akt/PKB transduces insulin  
receptor-like signals from AGE-1 PI3 kinase to the DAF-16 transcription  
factor.  
SO Genes & development, (1998 Aug 15) Vol. 12, No. 16, pp. 2488-98.  
Journal code: 8711660. ISSN: 0890-9369.  
AU Paradis S; Ruvkun G  
AB A neurosecretory pathway regulates a reversible developmental arrest and  
metabolic shift at the Caenorhabditis elegans dauer larval stage. Defects  
in an insulin-like signaling pathway cause arrest at the dauer  
stage. We show here that two C. elegans Akt/PKB homologs,  
akt-1 and akt-2, transduce insulin  
receptor-like signals that inhibit dauer arrest and that AKT-1  
and AKT-2 signaling are indispensable for insulin  
receptor-like signaling in C. elegans. A loss-of-function mutation in the  
Fork head transcription factor DAF-16 relieves the requirement for  
Akt/PKB signaling, which indicates that AKT-1 and  
AKT-2 function primarily to antagonize DAF-16. This is the first  
evidence that the major target of Akt/PKB signaling is a  
transcription factor. An activating mutation in akt-1, revealed  
by a genetic screen, as well as increased dosage of wild-type akt  
-1 relieves the requirement for signaling from AGE-1 PI3K, which acts  
downstream of the DAF-2 insulin/IGF-1 receptor homolog. This  
demonstrates that Akt/PKB activity is not necessarily dependent  
on AGE-1 PI3K activity. akt-1 and akt-2 are expressed  
in overlapping patterns in the nervous system and in tissues that are  
remodeled during dauer formation.



[Related Articles, Links](#)

[Paradis S, Ruvkun G.](#)



*Caenorhabditis elegans* Akt/PKB transduces insulin receptor-like signals from AGE-1 PI3 kinase to the DAF-16 transcription factor. *Genes Dev.* 1998 Aug 15;12(16):2488-98.

PMID: 9716402 [PubMed - indexed for MEDLINE]



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[Ogg S, Ruvkun G.](#)



The *C. elegans* PTEN homolog, DAF-18, acts in the insulin receptor-like metabolic signaling pathway.

*Mol Cell.* 1998 Dec;2(6):887-93.

PMID: 9885576 [PubMed - indexed for MEDLINE]



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[Paradis S, Ailion M, Toker A, Thomas JH, Ruvkun G.](#)



A PDK1 homolog is necessary and sufficient to transduce AGE-1 PI3 kinase signals that regulate diapause in *Caenorhabditis elegans*. *Genes Dev.* 1999 Jun 1;13(11):1438-52.

PMID: 10364160 [PubMed - indexed for MEDLINE]



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[Li Y, Dowbenko D, Lasky LA.](#)



*Caenorhabditis elegans* PIAK, a phospholipid-independent kinase that activates the AKT/PKB survival kinase.

*J Biol Chem.* 2001 Jun 8;276(23):20323-9. Epub 2001 Mar 23.

PMID: 11274160 [PubMed - indexed for MEDLINE]



[Related Articles, Links](#)

[Hertweck M, Göbel C, Baumeister R.](#)



*C. elegans* SGK-1 is the critical component in the Akt/PKB kinase complex to control stress response and life span.

*Dev Cell.* 2004 Apr;6(4):577-88.

PMID: 15068796 [PubMed - indexed for MEDLINE]



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[Hu PJ, Xu J, Ruvkun G.](#)



Two membrane-associated tyrosine phosphatase homologs potentiate *C. elegans* AKT-1/PKB signaling.

*PLoS Genet.* 2006 Jul;2(7):e99. Epub 2006 May 18.

PMID: 16839187 [PubMed - indexed for MEDLINE]



[Related Articles, Links](#)

[Gami MS, Iser WB, Hanselman KB, Wolkow CA.](#)



Activated AKT/PKB signaling in *C. elegans* uncouples temporally distinct outputs of DAF-2/insulin-like signaling.

*BMC Dev Biol.* 2006 Oct 4;6:45.

## EAST Search History

Ref #	Hits	Search Query	DBs	Default Operator	Plurals	Time Stamp
L1	1	09/844353	US-PGPUB; USPAT; EPO; JPO; DERWENT	OR	ON	2008/02/12 11:50
L2	29	Ruvkun Gary OR Ogg Scott OR Paradis Suzanne	US-PGPUB; USPAT; EPO; JPO; DERWENT	NEAR	ON	2008/02/12 11:52
L3	7272	AKT AKT-1 AKT-2 AKT\$2	US-PGPUB; USPAT; EPO; JPO; DERWENT	OR	ON	2008/02/12 11:53
L4	101315	INSULIN	US-PGPUB; USPAT; EPO; JPO; DERWENT	OR	ON	2008/02/12 11:53
L5	11726	elegans	US-PGPUB; USPAT; EPO; JPO; DERWENT	OR	ON	2008/02/12 11:54
L6	39	I3 I4 I5	US-PGPUB; USPAT; EPO; JPO; DERWENT	SAME	ON	2008/02/12 11:54
L7	340	I3 I4 I5	US-PGPUB; USPAT; EPO; JPO; DERWENT	AND	ON	2008/02/12 11:54
L8	4	(I3 I4 I5).clm.	US-PGPUB; USPAT; EPO; JPO; DERWENT	AND	ON	2008/02/12 11:54
L9	1838	(AKT AKT-1 AKT-2 AKT\$2) SAME (human mammal\$3)	US-PGPUB; USPAT; EPO; JPO; DERWENT	OR	ON	2008/02/12 11:57
L10	173	I9 I4 I5	US-PGPUB; USPAT; EPO; JPO; DERWENT	AND	ON	2008/02/12 11:58
L11	33	I9 I4 I5	US-PGPUB; USPAT; EPO; JPO; DERWENT	SAME	ON	2008/02/12 11:58
L13	82	(AKT AKT-1 AKT-2 AKT\$2) SAME (human mammal\$3).clm.	US-PGPUB; USPAT; EPO; JPO; DERWENT	OR	ON	2008/02/12 12:01
L14	68	method SAME (AKT AKT-1 AKT-2 AKT\$2) SAME (human mammal\$3).clm.	US-PGPUB; USPAT; EPO; JPO; DERWENT	OR	ON	2008/02/12 12:04

## EAST Search History

L15	1	elegans SAME method SAME (AKT AKT-1 AKT-2 AKT\$2) SAME (human mammal\$3).clm.	US-PGPUB; USPAT; EPO; JPO; DERWENT	OR	ON	2008/02/12 12:06
L16	7	elegans AND method AND (AKT AKT-1 AKT-2 AKT\$2) SAME (human mammal\$3).clm.	US-PGPUB; USPAT; EPO; JPO; DERWENT	OR	ON	2008/02/12 12:07